AMENDMENTS TO THE DRAWINGS

Attached hereto are thirty (30) replacement drawing sheets that comply with the provisions of 37 C.F.R. § 1.84. The replacement drawings incorporate the following drawing changes:

All of the figures have been reformatted using a different font and having better quality lines to place them in better form for U.S. practice;

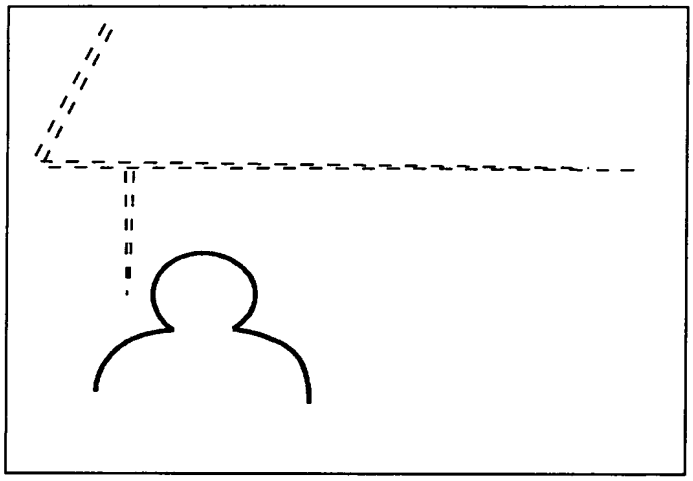
In Fig. 8, a "scan line" has been added; and the words "Amount of Scanning" have been changed to --Amount of scans--; and

In Fig. 9, the words "Amount of Scanning" have been changed to --Amount of scans--.

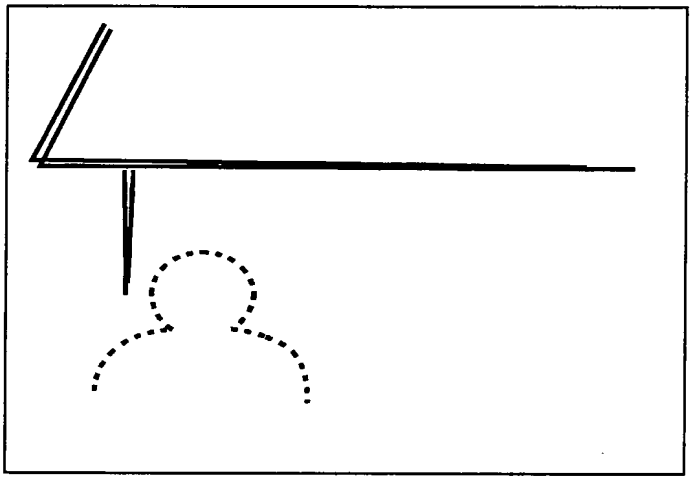
It is respectfully requested that the replacement drawing sheets be approved and made a part of the record of the above-identified application.

Fig.1

(a)



(b)



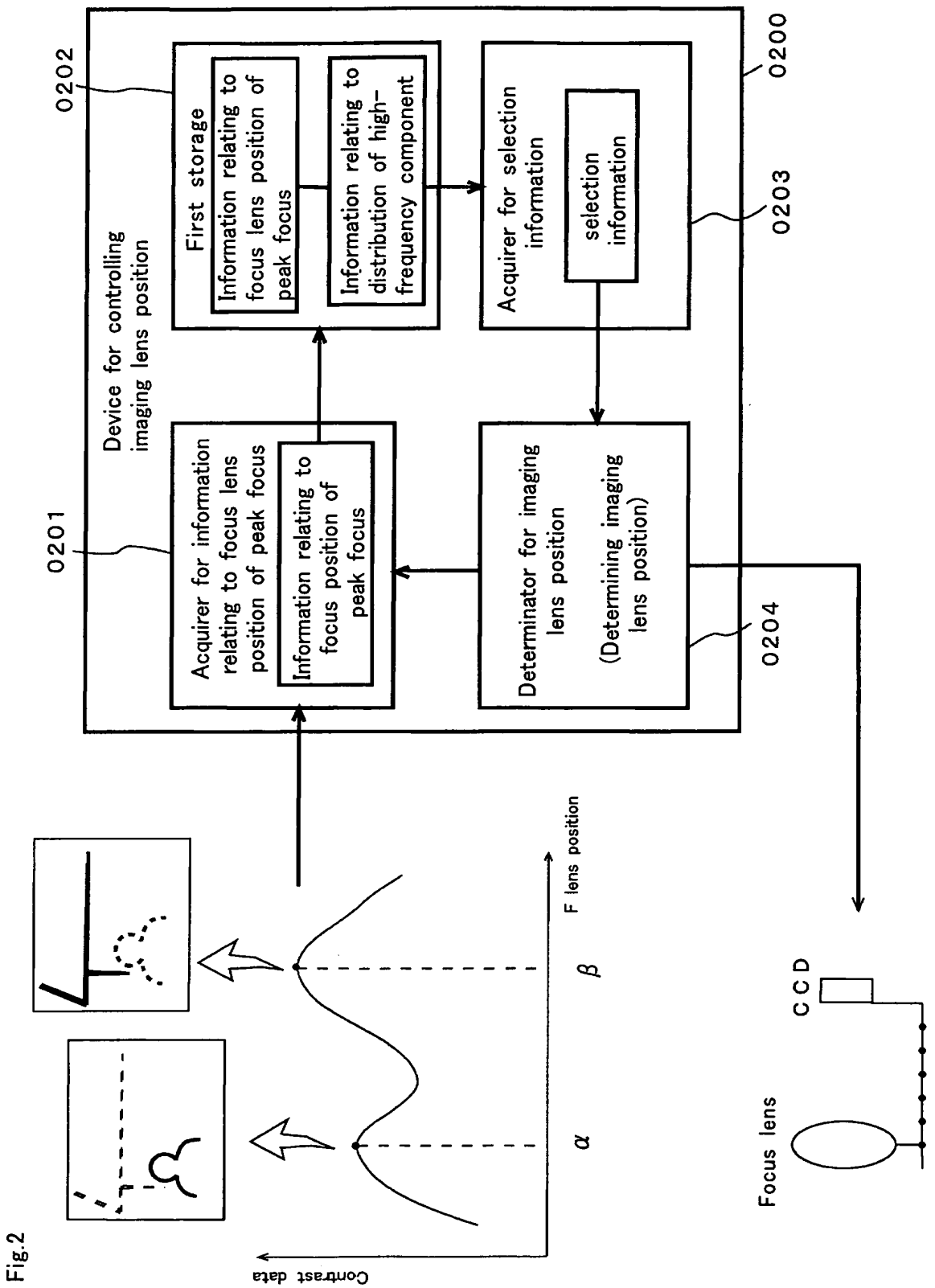

0200
Device for controlling imaging lens position
0201
Acquirer for information relating to focus lens position of peak focus
Information relating to focus position of peak focus
0202
First storage
Information relating to focus lens position of peak focus
Information relating to distribution of high-frequency component
0203
Acquirer for selection information
selection information
0204
Determinator for imaging lens position
(Determining imaging lens position)
CCD
Focus lens
F lens position
Contrast data
α
β

Fig.2

Fig. 3

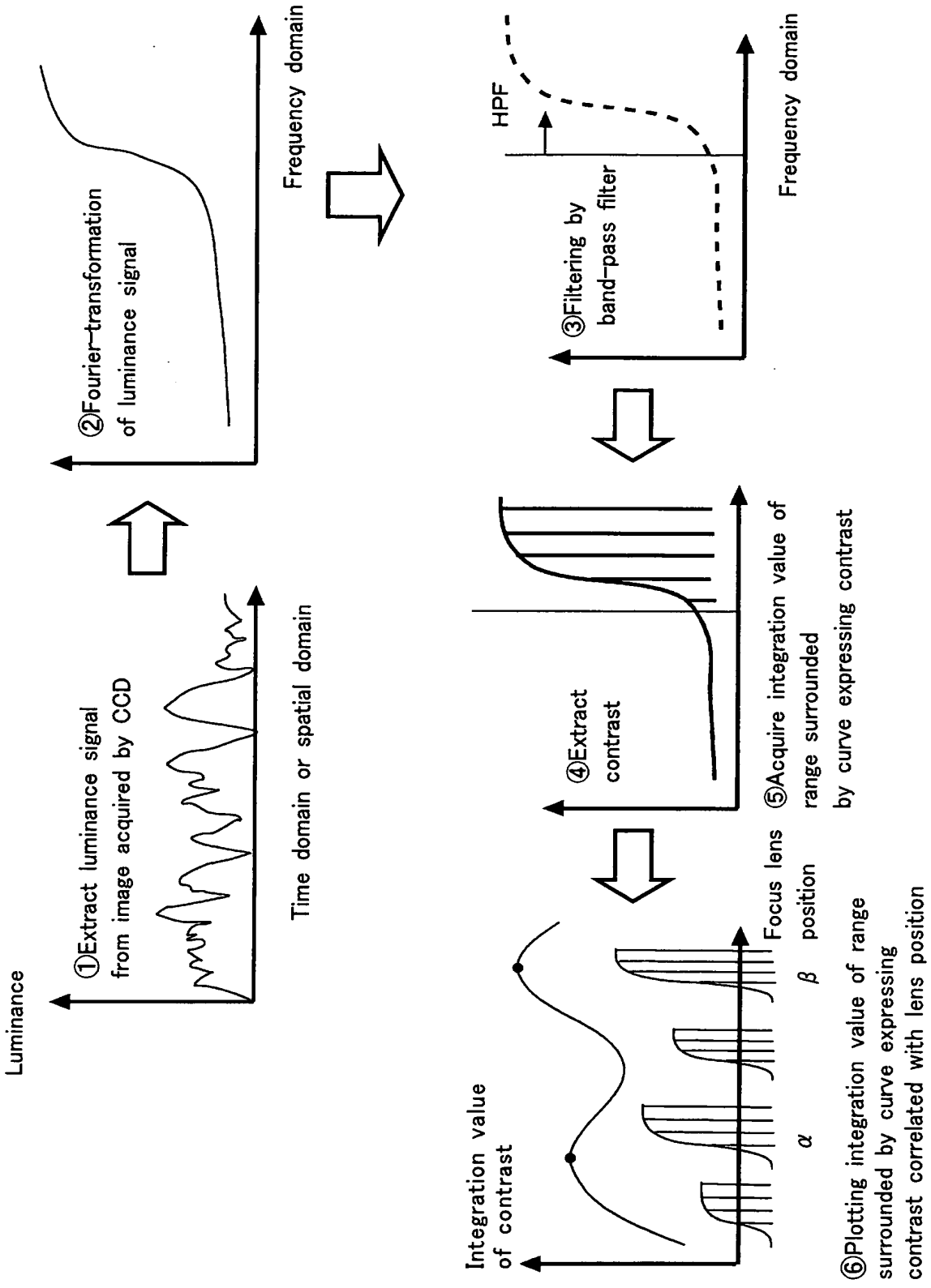

Luminance
①Extract luminance signal from image acquired by CCD
Time domain or spatial domain
②Fourier-transformation of luminance signal
Frequency domain
HPF
③Filtering by band-pass filter
Frequency domain
④Extract contrast
⑤Acquire integration value of range surrounded by curve expressing contrast
Integration value of contrast
Focus lens position
α
β
⑥Plotting integration value of range surrounded by curve expressing contrast correlated with lens position

Fig.4

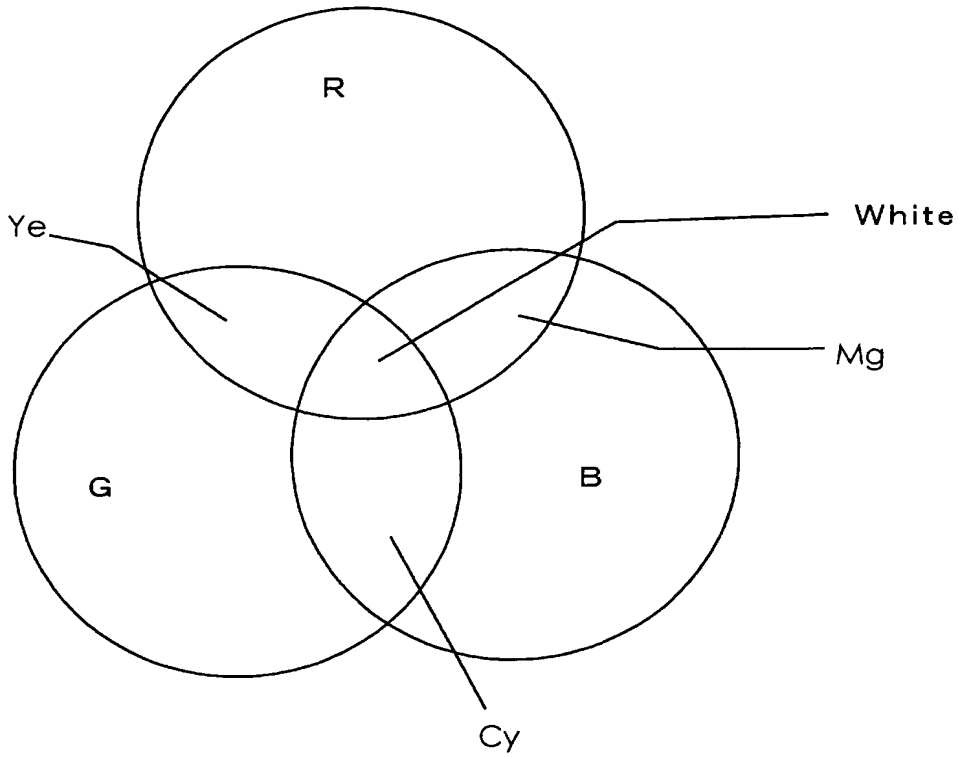


Fig.5

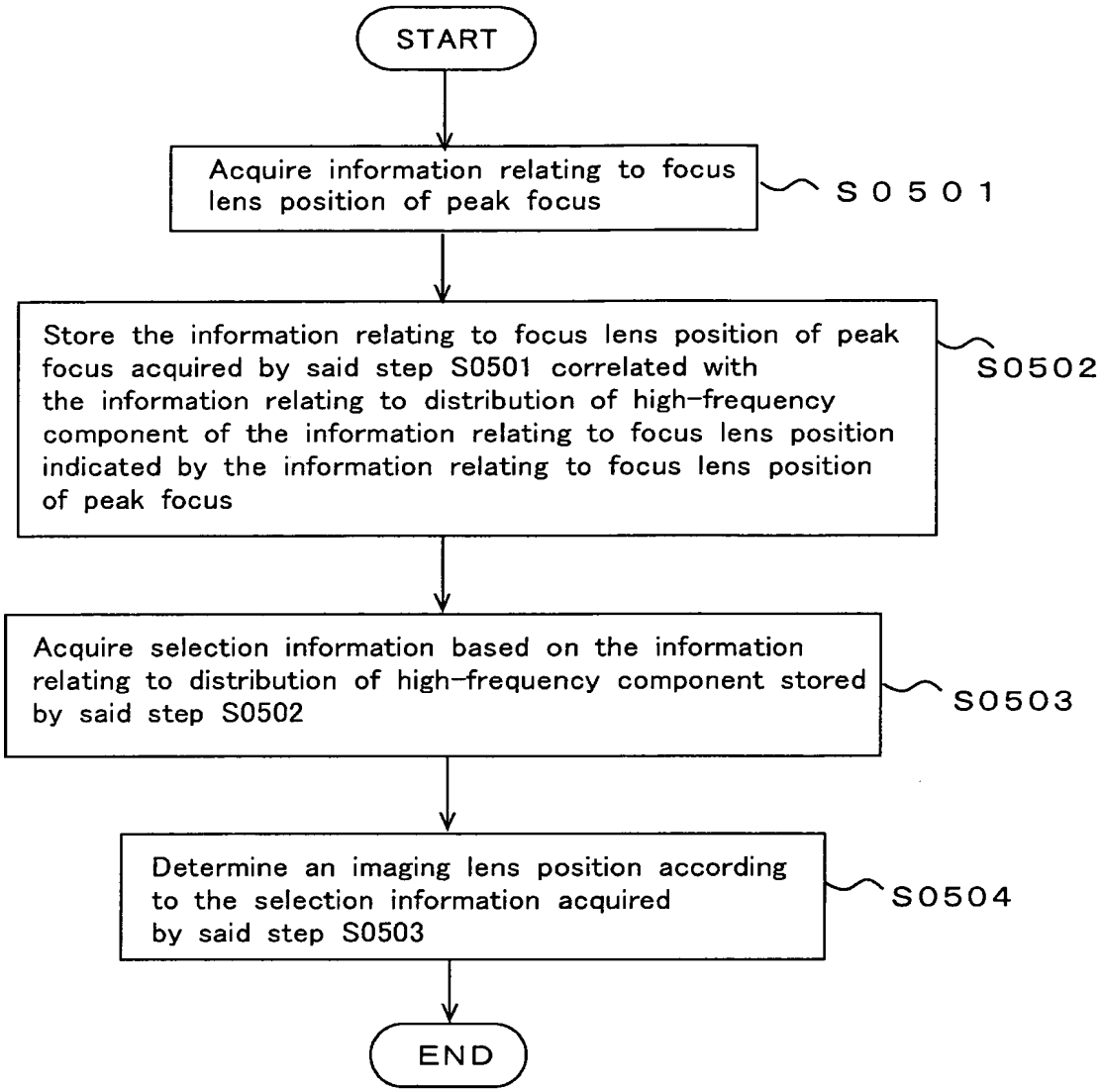
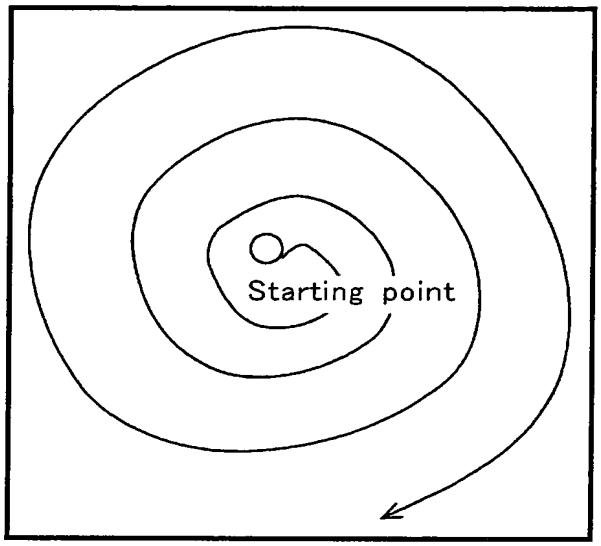

START
Acquire information relating to focus lens position of peak focus
S0501
Store the information relating to focus lens position of peak focus acquired by said step S0501 correlated with the information relating to distribution of high-frequency component of the information relating to focus lens position indicated by the information relating to focus lens position of peak focus
S0502
Acquire selection information based on the information relating to distribution of high-frequency component stored by said step S0502
S0503
Determine an imaging lens position according to the selection information acquired by said step S0503
S0504
END

Fig.6



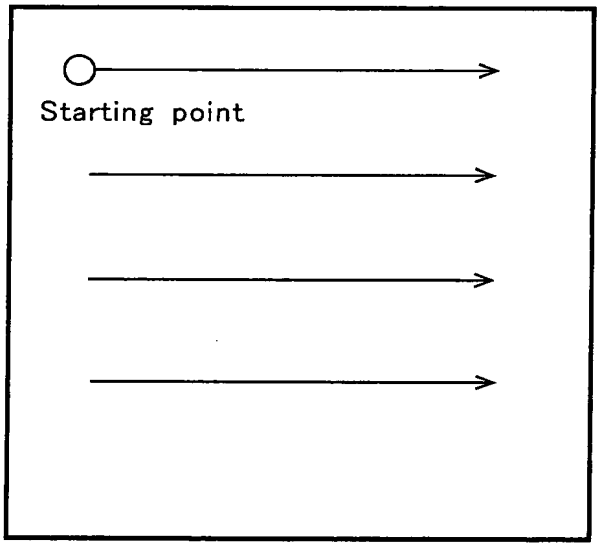


Fig.7

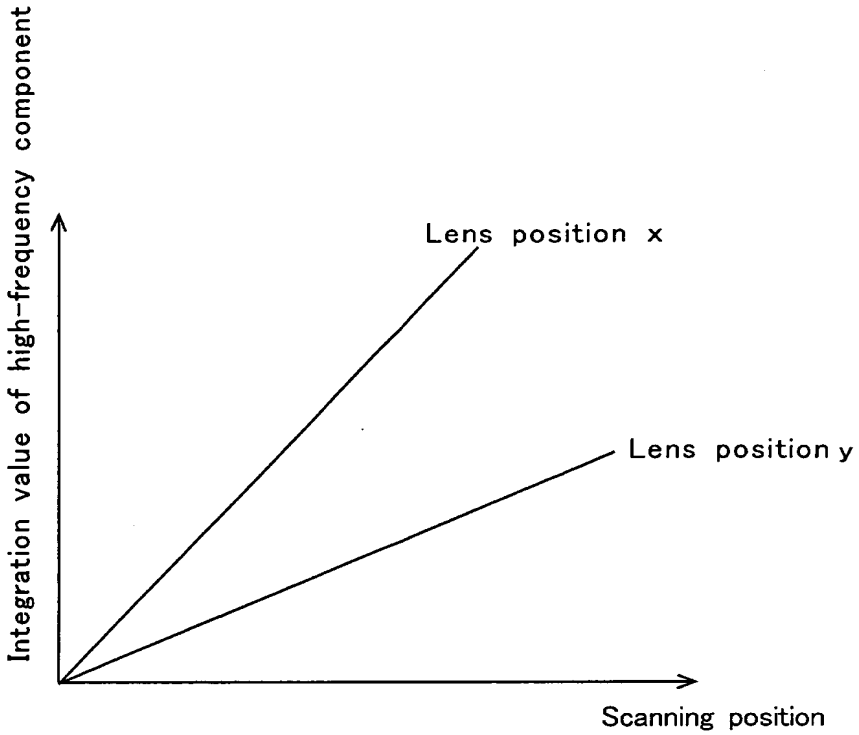

Integration value of high-frequency component
Lens position x
Lens position y
Scanning position

Fig. 8

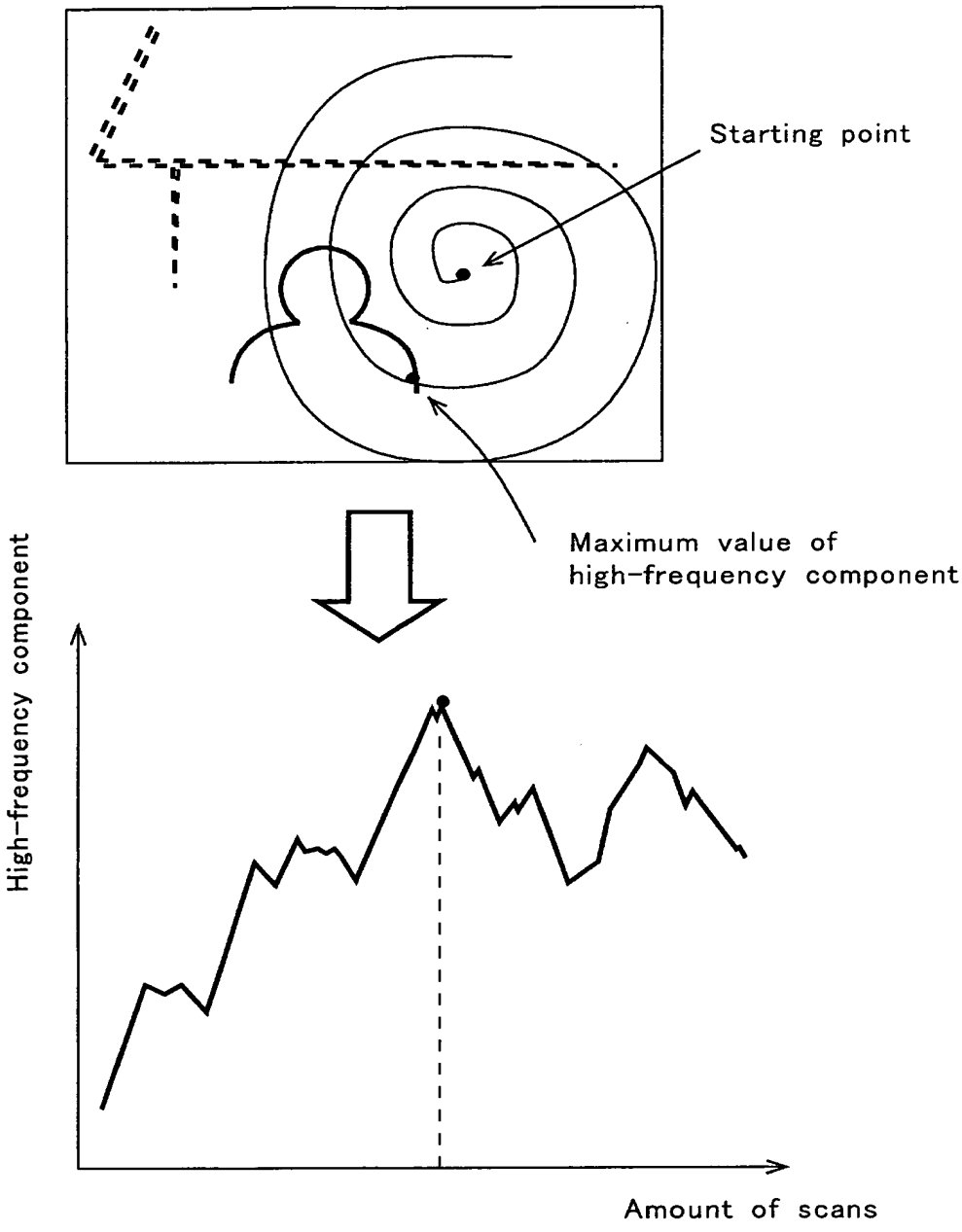

Starting point
Maximum value of
high-frequency component
High-frequency component
Amount of scans

Fig.9

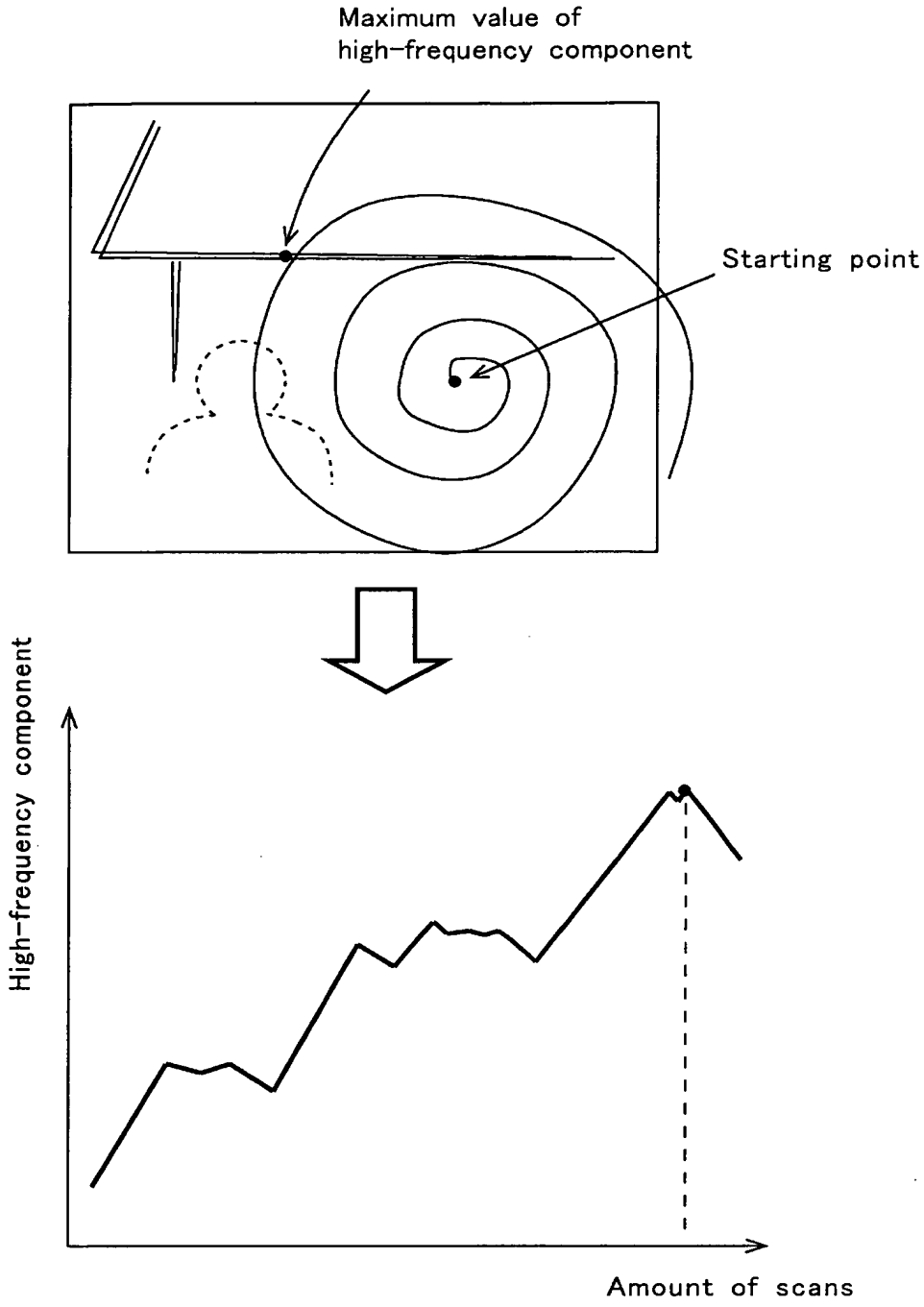
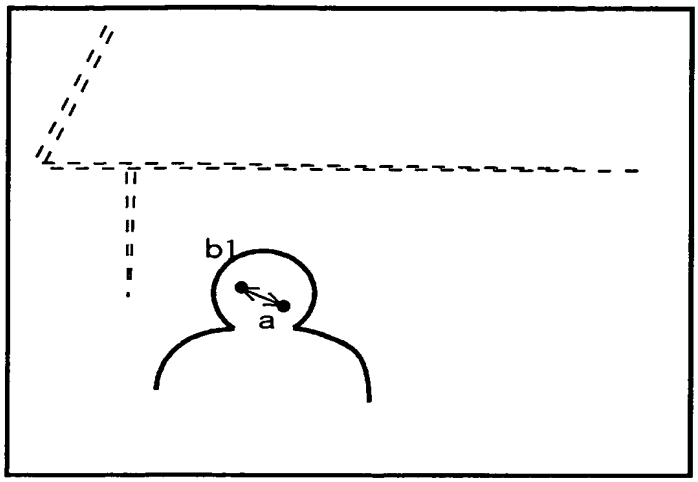
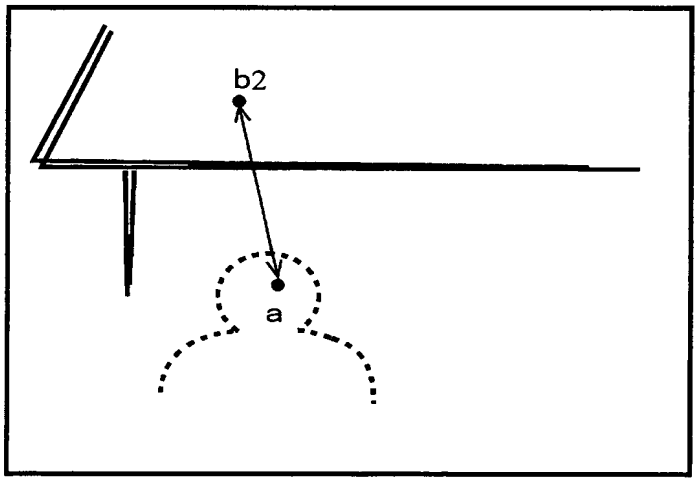

Maximum value of
high-frequency component
Starting point
High-frequency component
Amount of scans

Fig.10

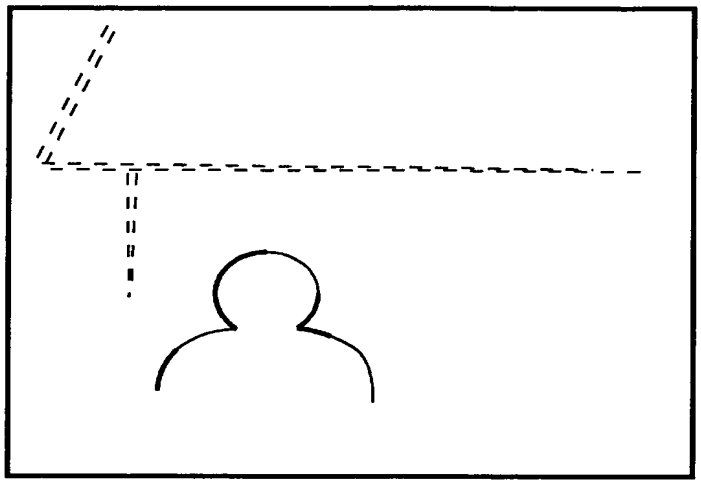


(1)

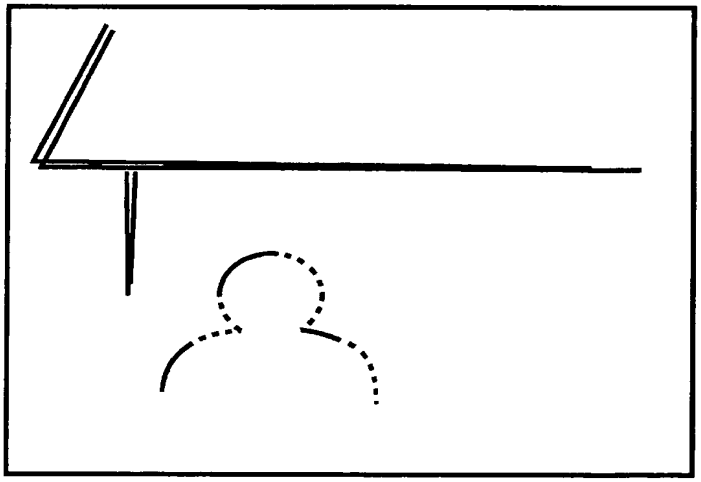


(2)

Fig.11



(a)Binary format image



(b)Binary format image

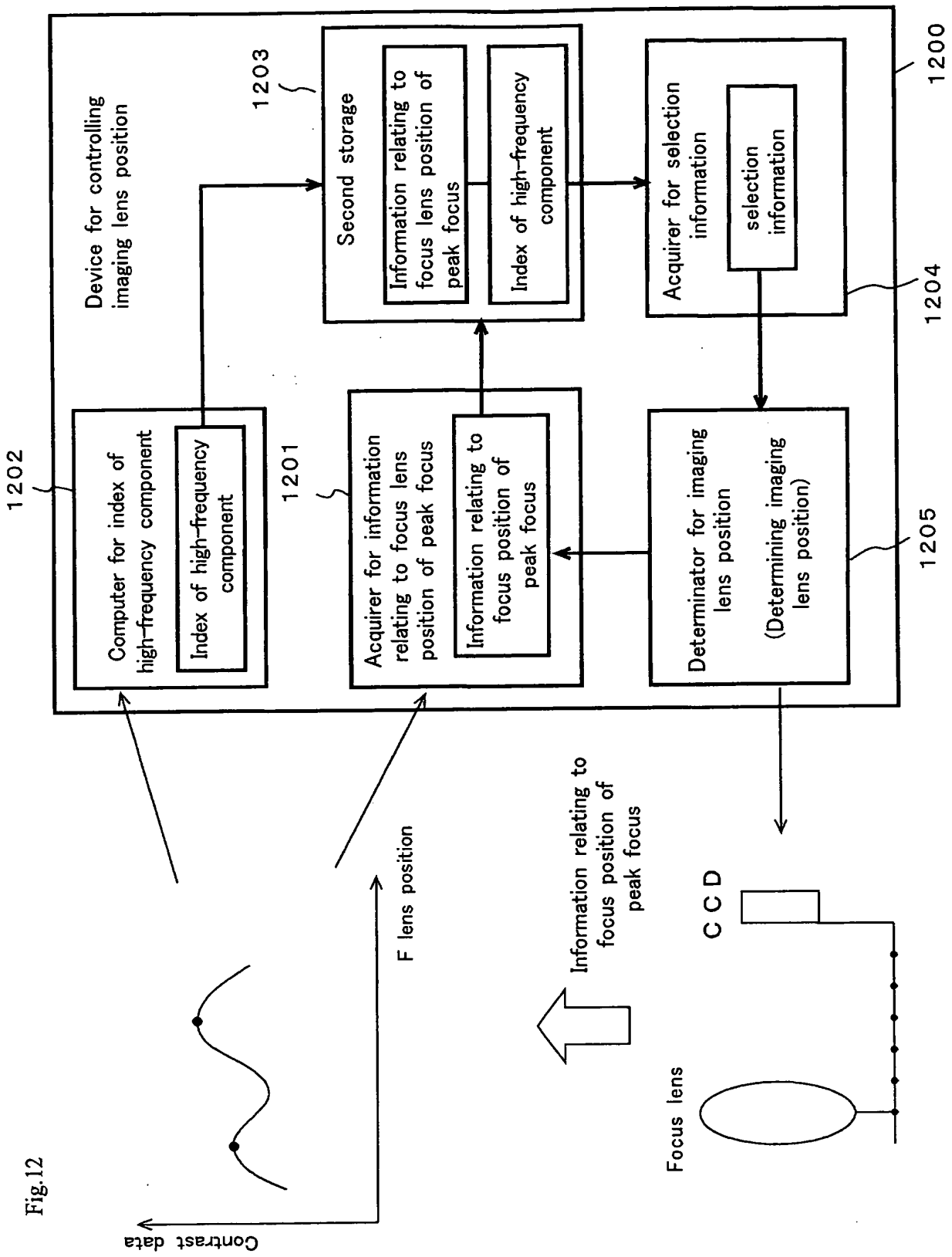

Device for controlling imaging lens position
1200
1201
Acquirer for information relating to focus lens position of peak focus
Information relating to focus position of peak focus
1202
Computer for index of high-frequency component
Index of high-frequency component
1203
Second storage
Information relating to focus lens position of peak focus
Index of high-frequency component
1204
Acquirer for selection information
selection information
1205
Determinator for imaging lens position
(Determining imaging lens position)
Information relating to focus position of peak focus
F lens position
Contrast data
CCD
Focus lens

Fig.12

Fig.13

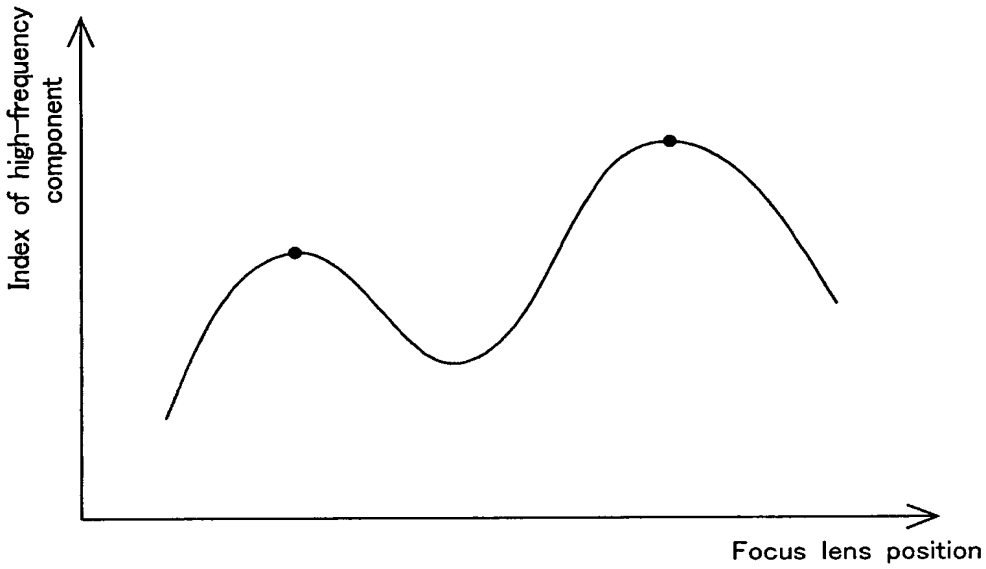


Fig. 14

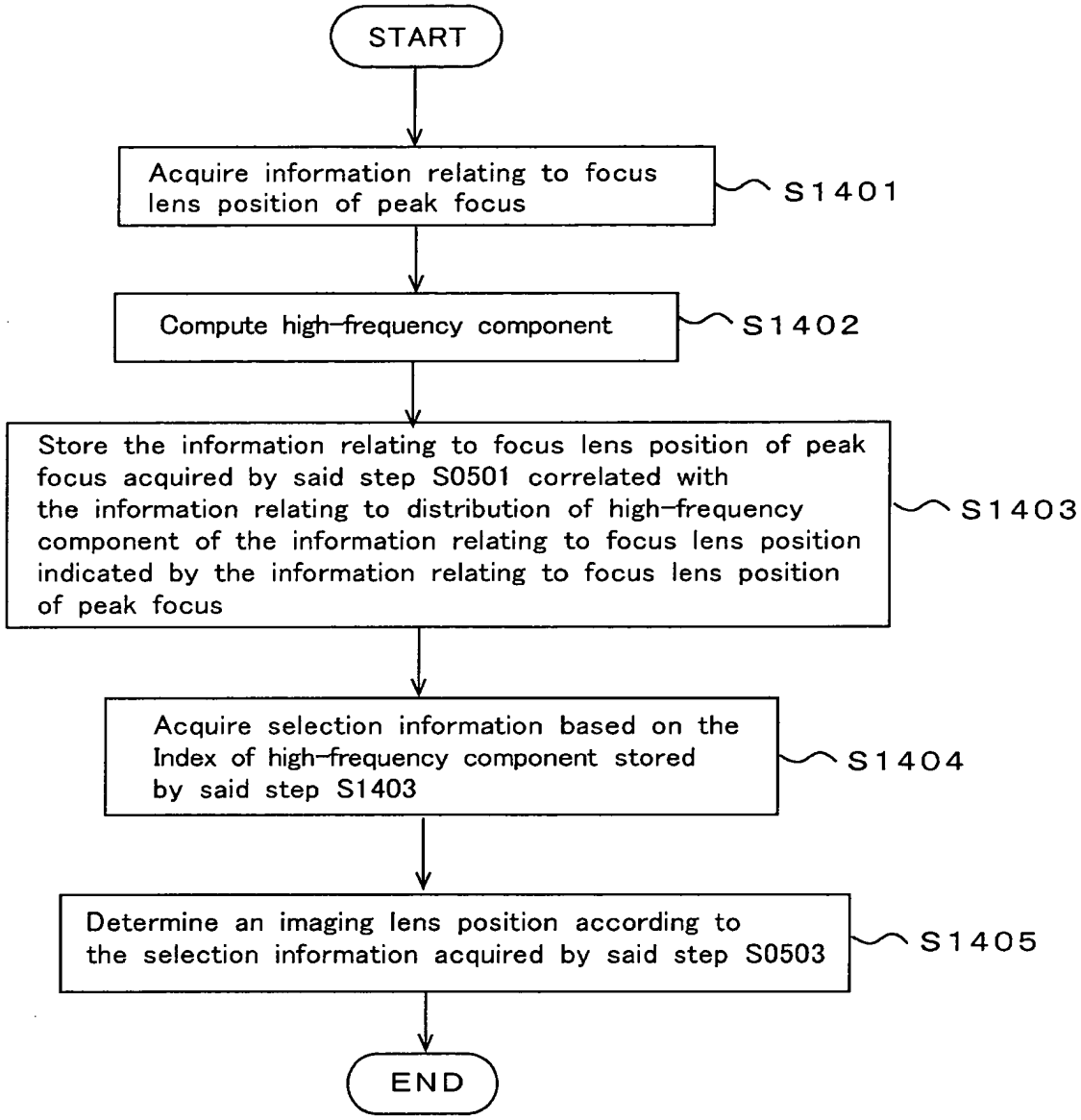

START
Acquire information relating to focus lens position of peak focus
S1401
Compute high-frequency component
S1402
Store the information relating to focus lens position of peak focus acquired by said step S0501 correlated with the information relating to distribution of high-frequency component of the information relating to focus lens position indicated by the information relating to focus lens position of peak focus
S1403
Acquire selection information based on the Index of high-frequency component stored by said step S1403
S1404
Determine an imaging lens position according to the selection information acquired by said step S0503
S1405
END

Fig.15

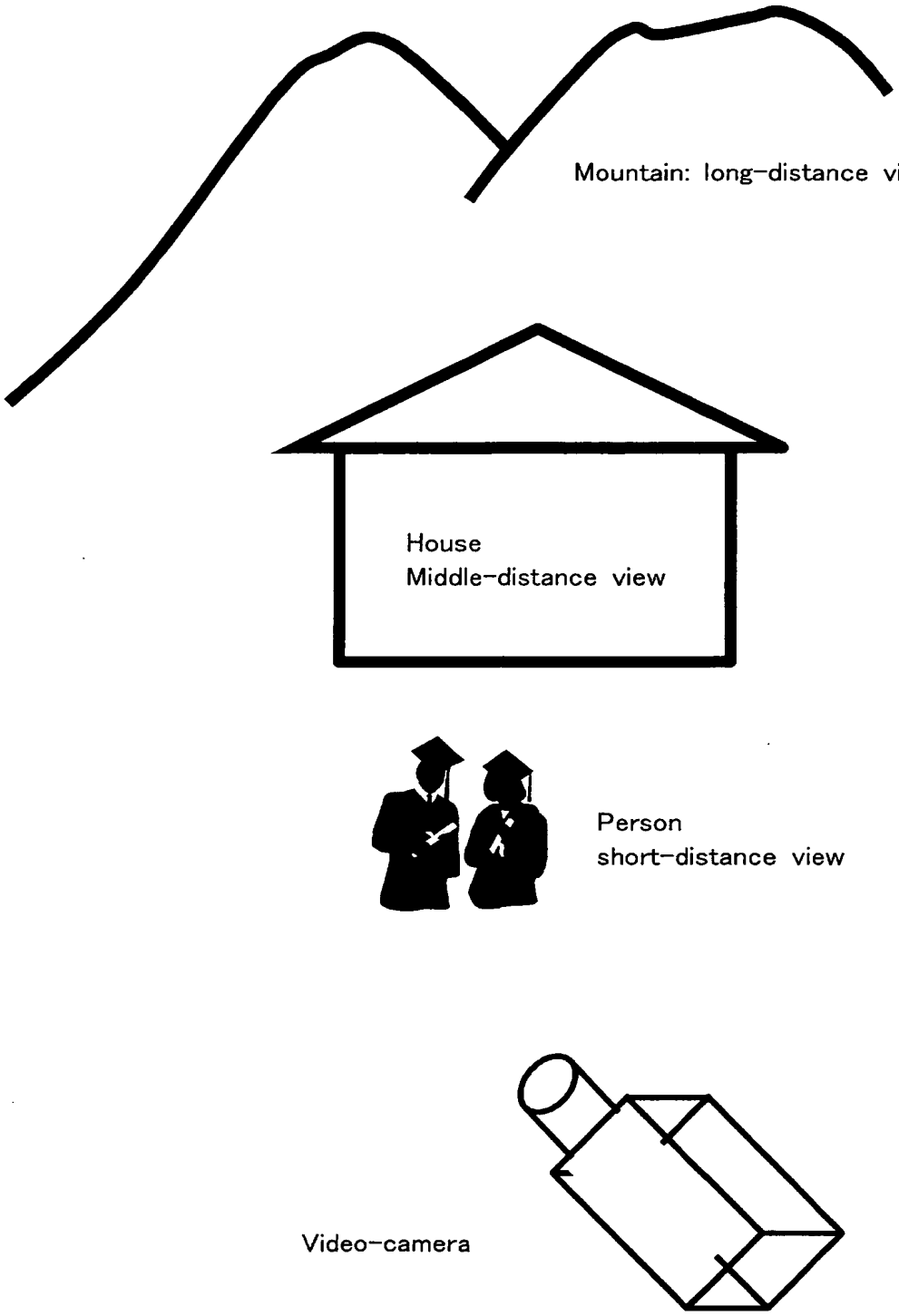
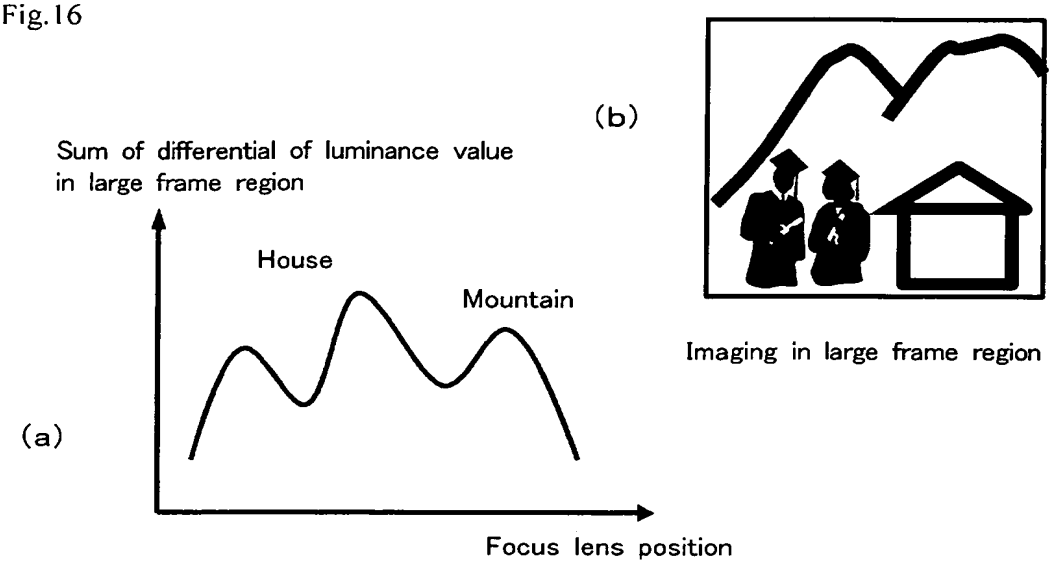
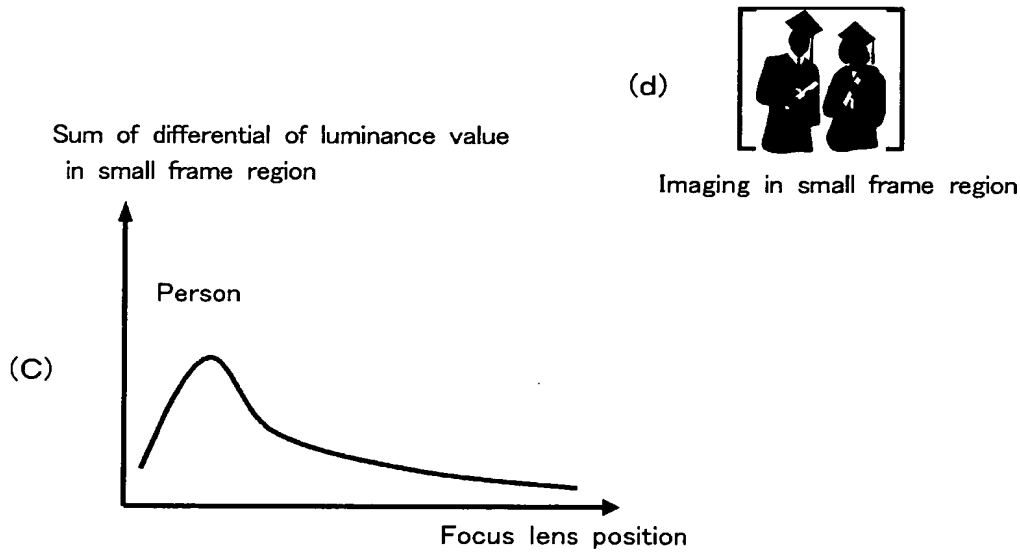

Mountain: long-distance view
House
Middle-distance view
Person
short-distance view
Video-camera

Fig.16



Correlation between focus lens position
in large frame region and luminance value in large frame region



Correlation between focus lens position
in small frame region and luminance value in large frame region

Fig.17

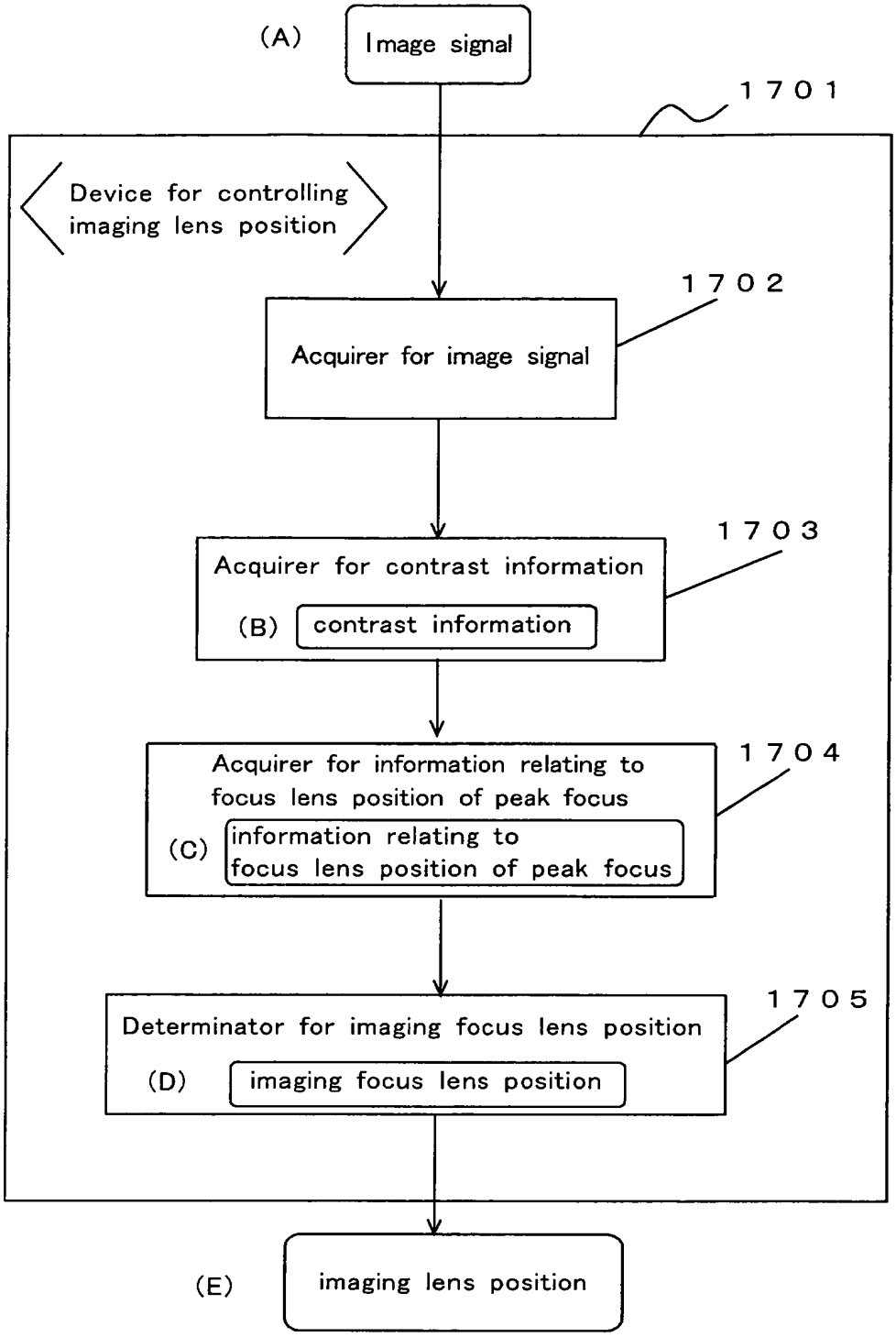

(A)
Image signal
1701
Device for controlling imaging lens position
1702
Acquirer for image signal
1703
Acquirer for contrast information
(B)
contrast information
1704
Acquirer for information relating to focus lens position of peak focus
(C)
information relating to focus lens position of peak focus
1705
Determinator for imaging focus lens position
(D)
imaging focus lens position
(E)
imaging lens position

Fig. 18

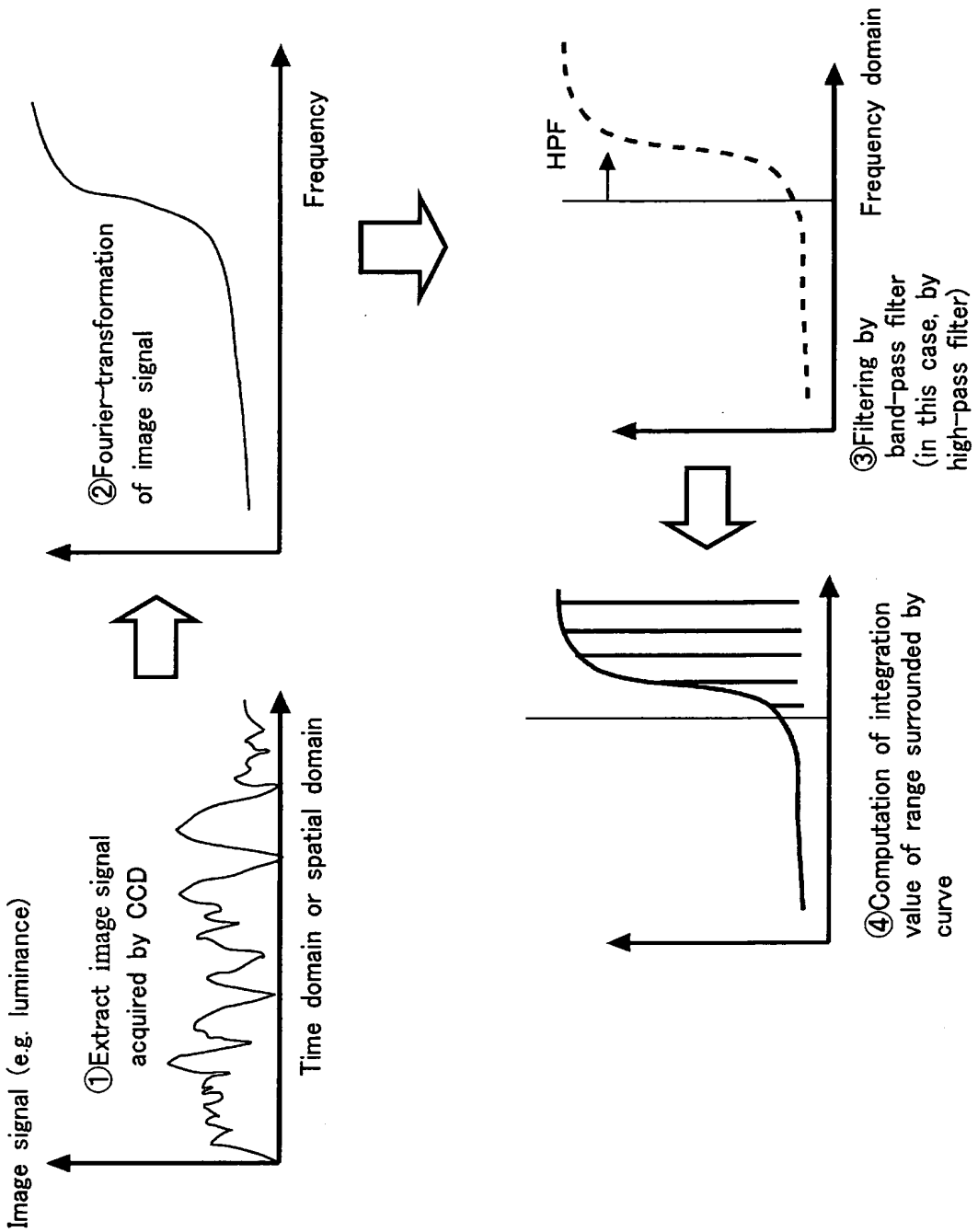
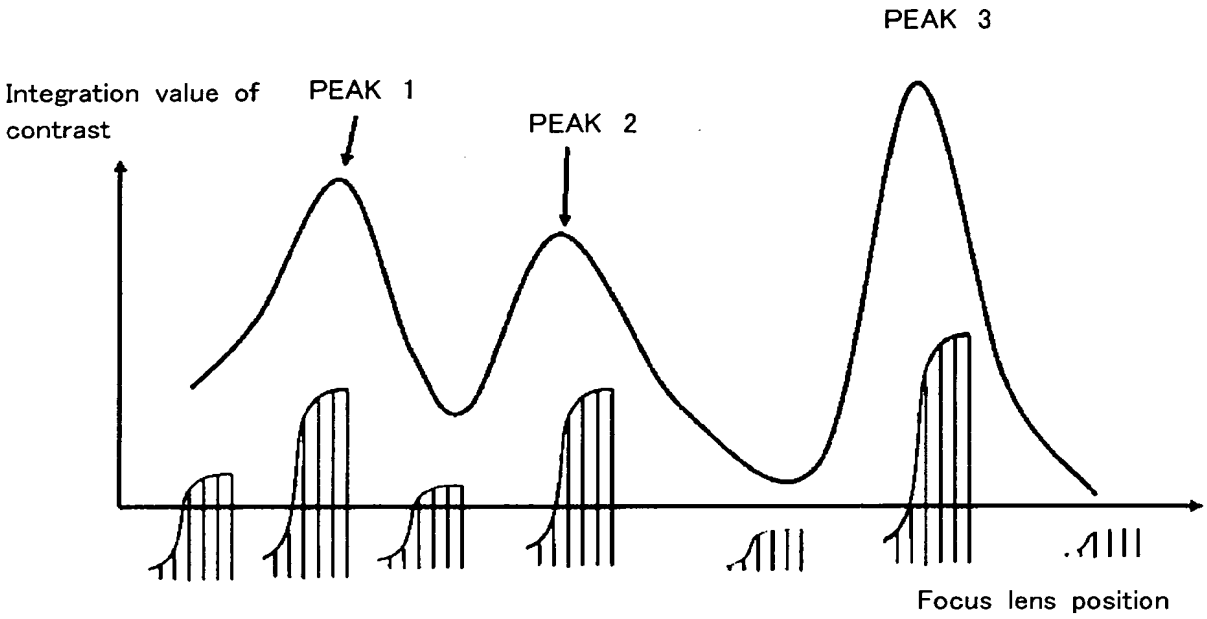


Image signal (e.g. luminance)
①Extract image signal acquired by CCD
Time domain or spatial domain
②Fourier-transformation of image signal
Frequency
HPF
Frequency domain
③Filtering by band-pass filter (in this case, by high-pass filter)
④Computation of integration value of range surrounded by curve

Fig.19



⑤Plotting integration value of range surrounded by curve, which is correlated with lens position

Fig.20

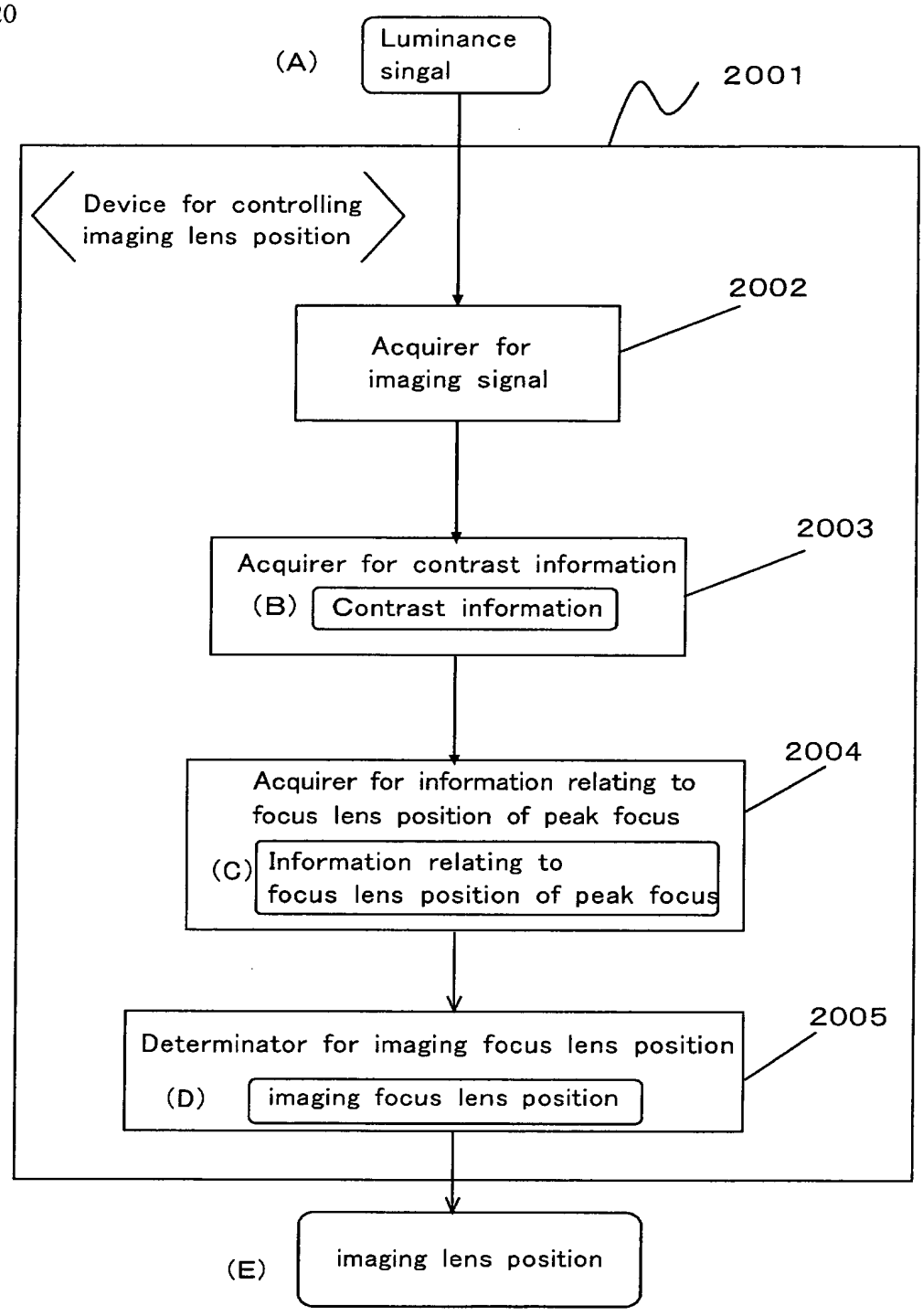

(A)
Luminance singal
2001
Device for controlling imaging lens position
2002
Acquirer for imaging signal
2003
Acquirer for contrast information
(B)
Contrast information
2004
Acquirer for information relating to focus lens position of peak focus
(C)
Information relating to focus lens position of peak focus
2005
Determinator for imaging focus lens position
(D)
imaging focus lens position
(E)
imaging lens position

Fig.21

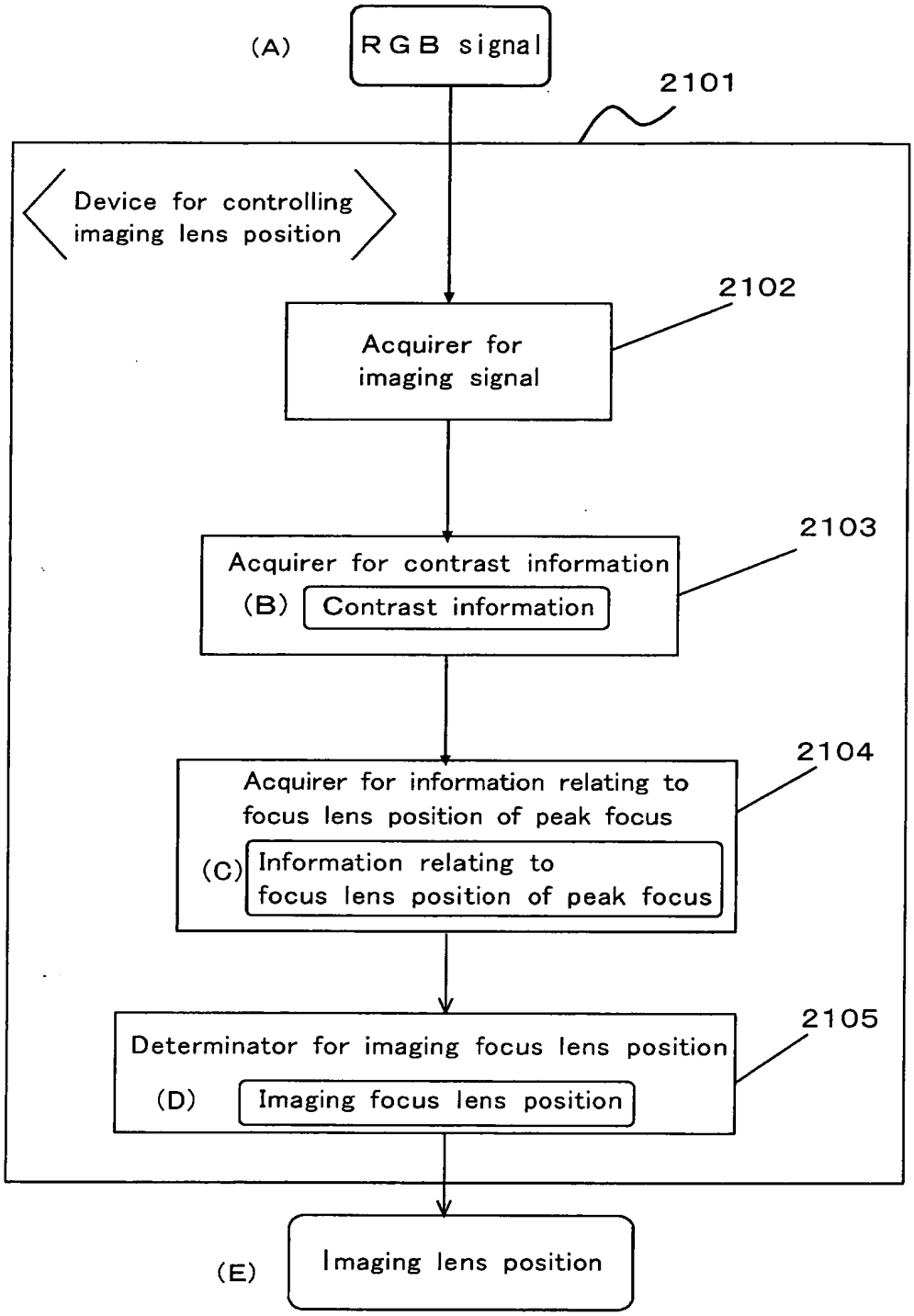

(A)
RGB signal
2101
Device for controlling imaging lens position
2102
Acquirer for imaging signal
2103
Acquirer for contrast information
(B)
Contrast information
2104
Acquirer for information relating to focus lens position of peak focus
(C)
Information relating to focus lens position of peak focus
2105
Determinator for imaging focus lens position
(D)
Imaging focus lens position
(E)
Imaging lens position

Fig.22

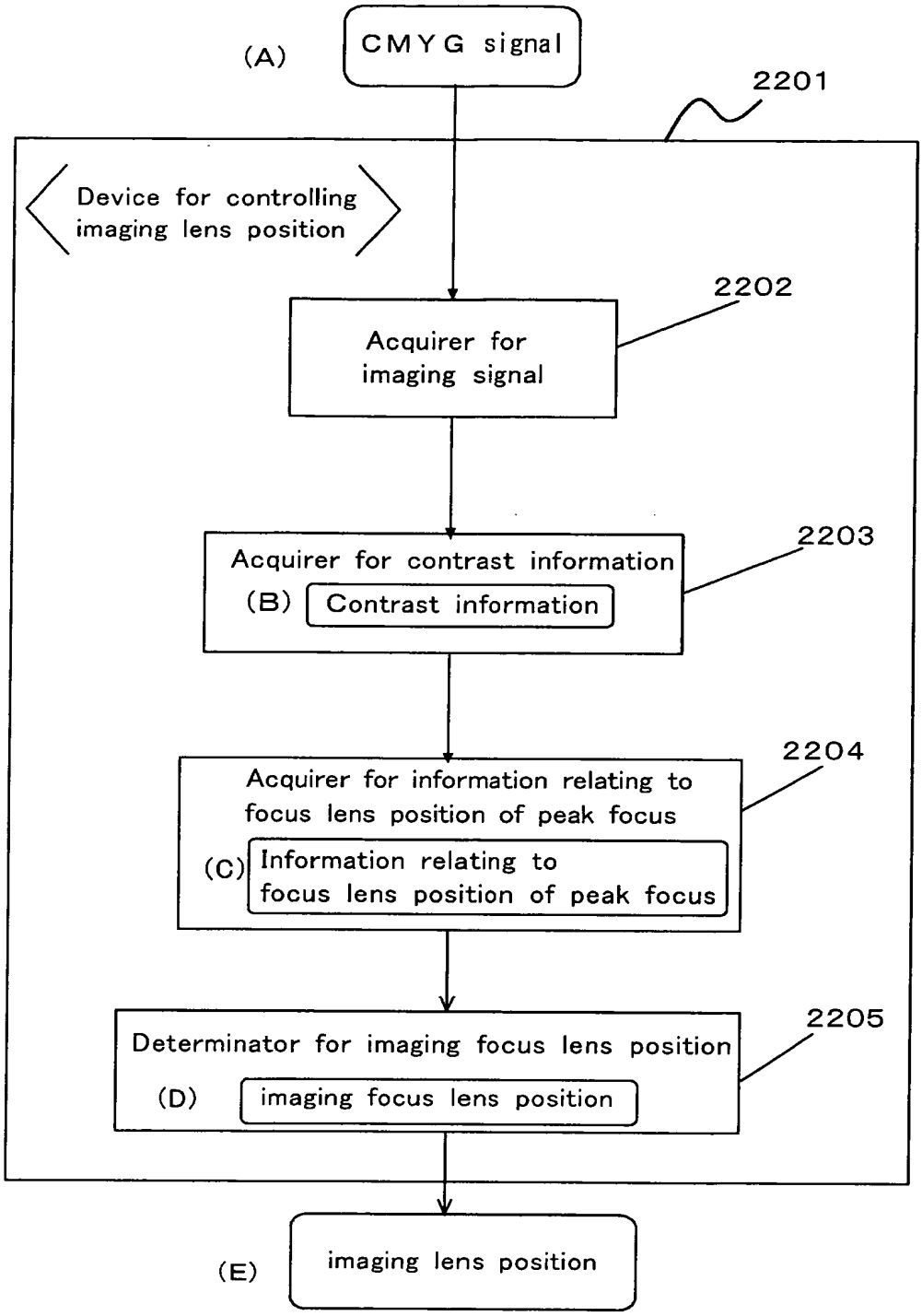

(A)
CMYG signal
2201
Device for controlling imaging lens position
2202
Acquirer for imaging signal
2203
Acquirer for contrast information
(B)
Contrast information
2204
Acquirer for information relating to focus lens position of peak focus
(C)
Information relating to focus lens position of peak focus
2205
Determinator for imaging focus lens position
(D)
imaging focus lens position
(E)
imaging lens position

Fig.23

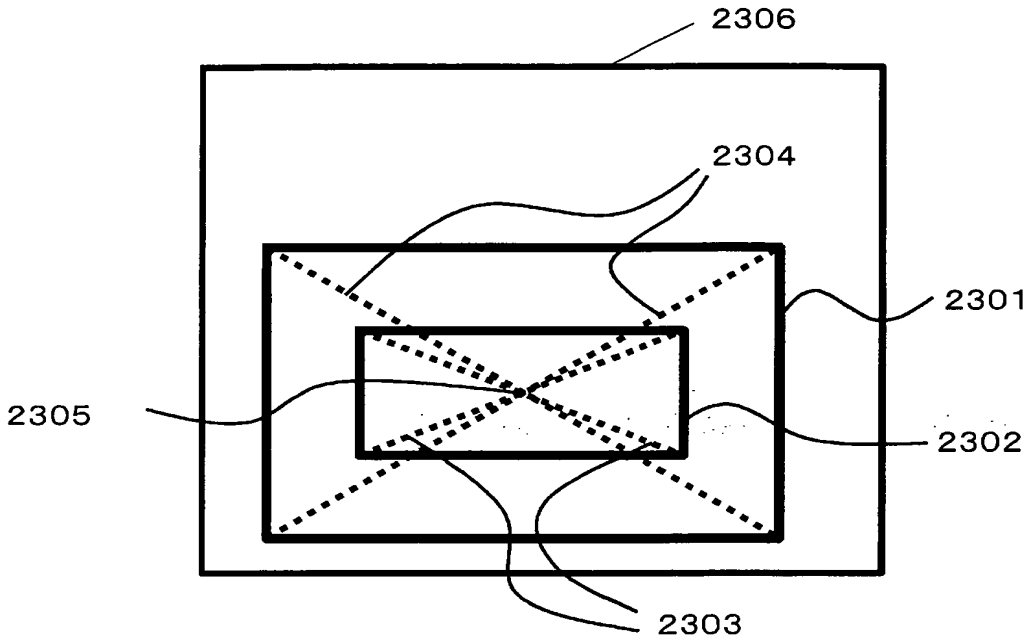


Fig.24.

	Small frame domain	Large frame region
2401	Variable	Variable
2402	Fixed	Variable
2403	Variable	Fixed
2404	Fixed	Fixed
2405	Relative position to large frame region is fixed	Variable
2406	Variable	Relative position to samll frame region is fixed

Fig.25

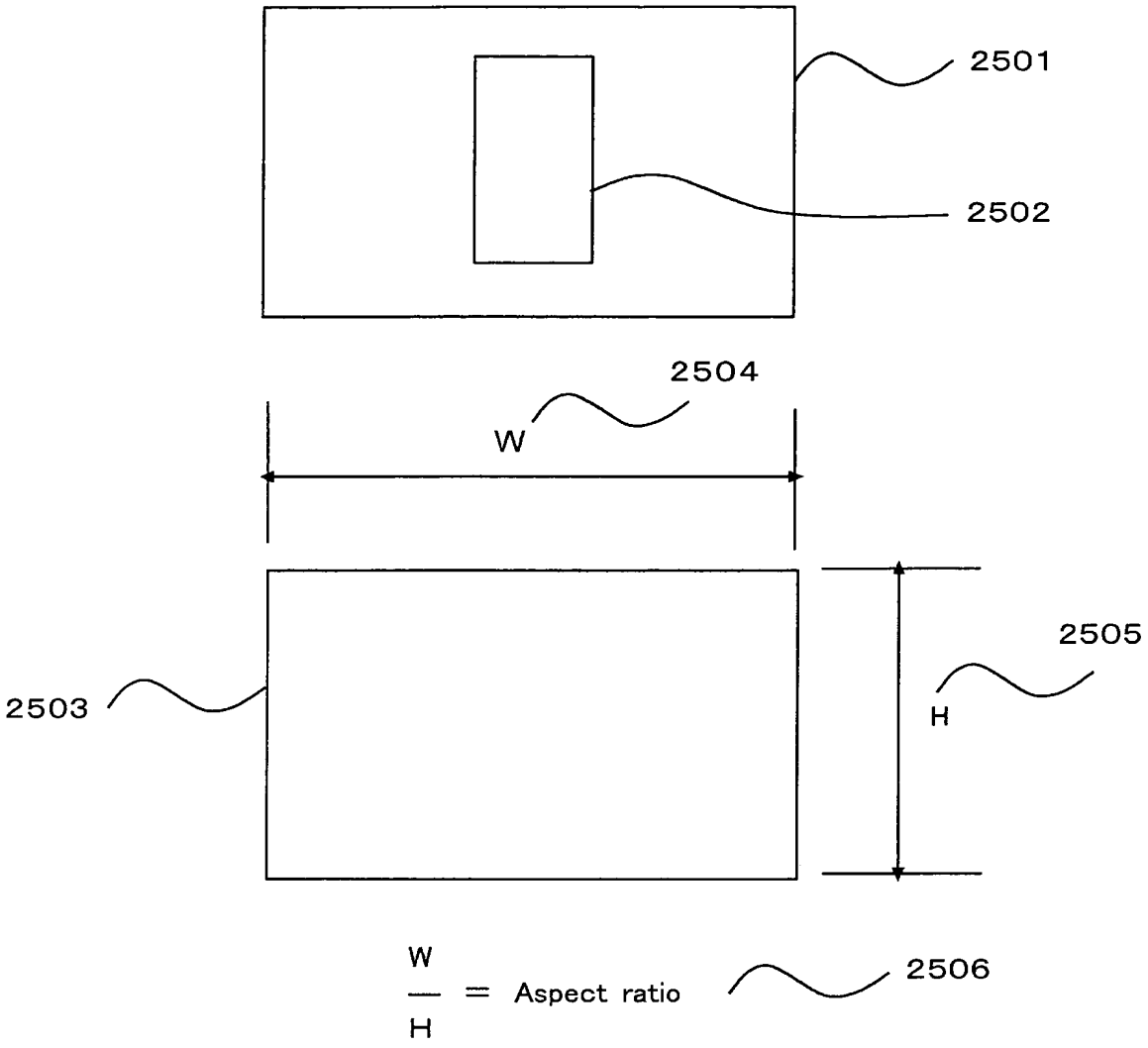
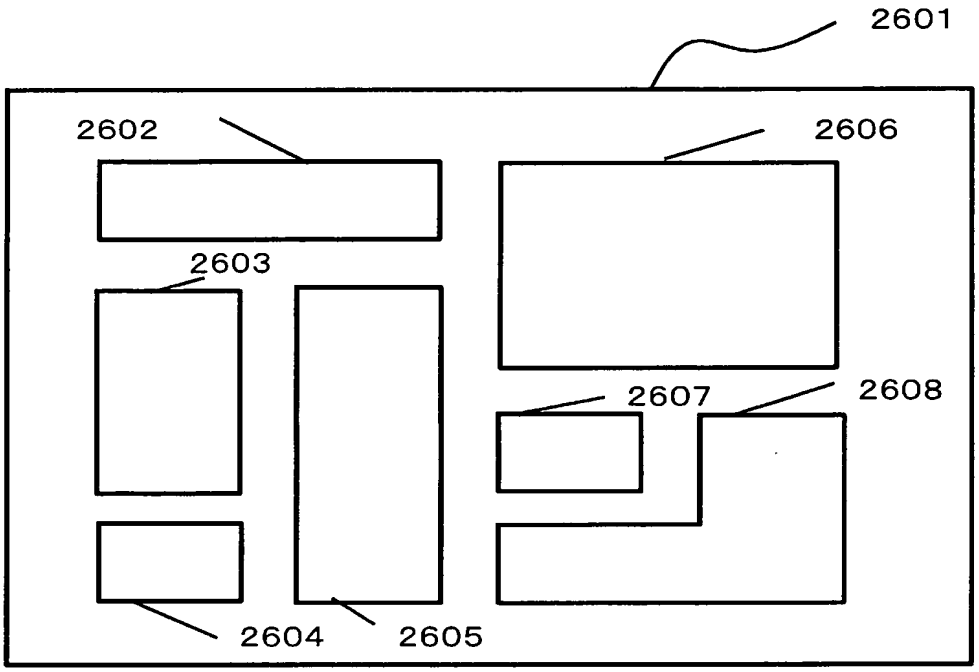


Fig.26



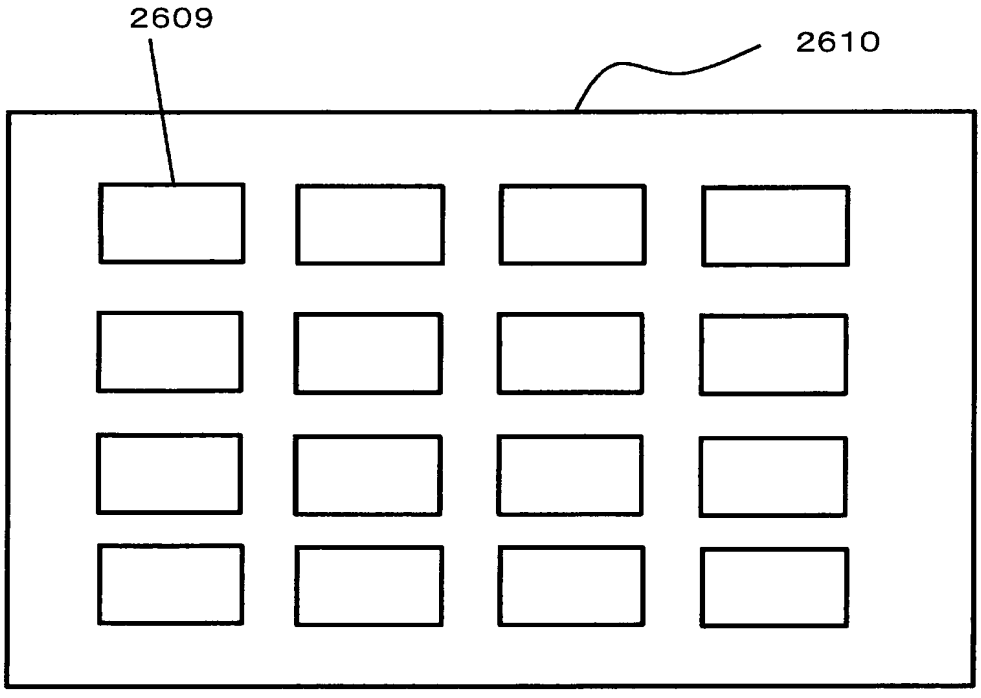


Fig.27

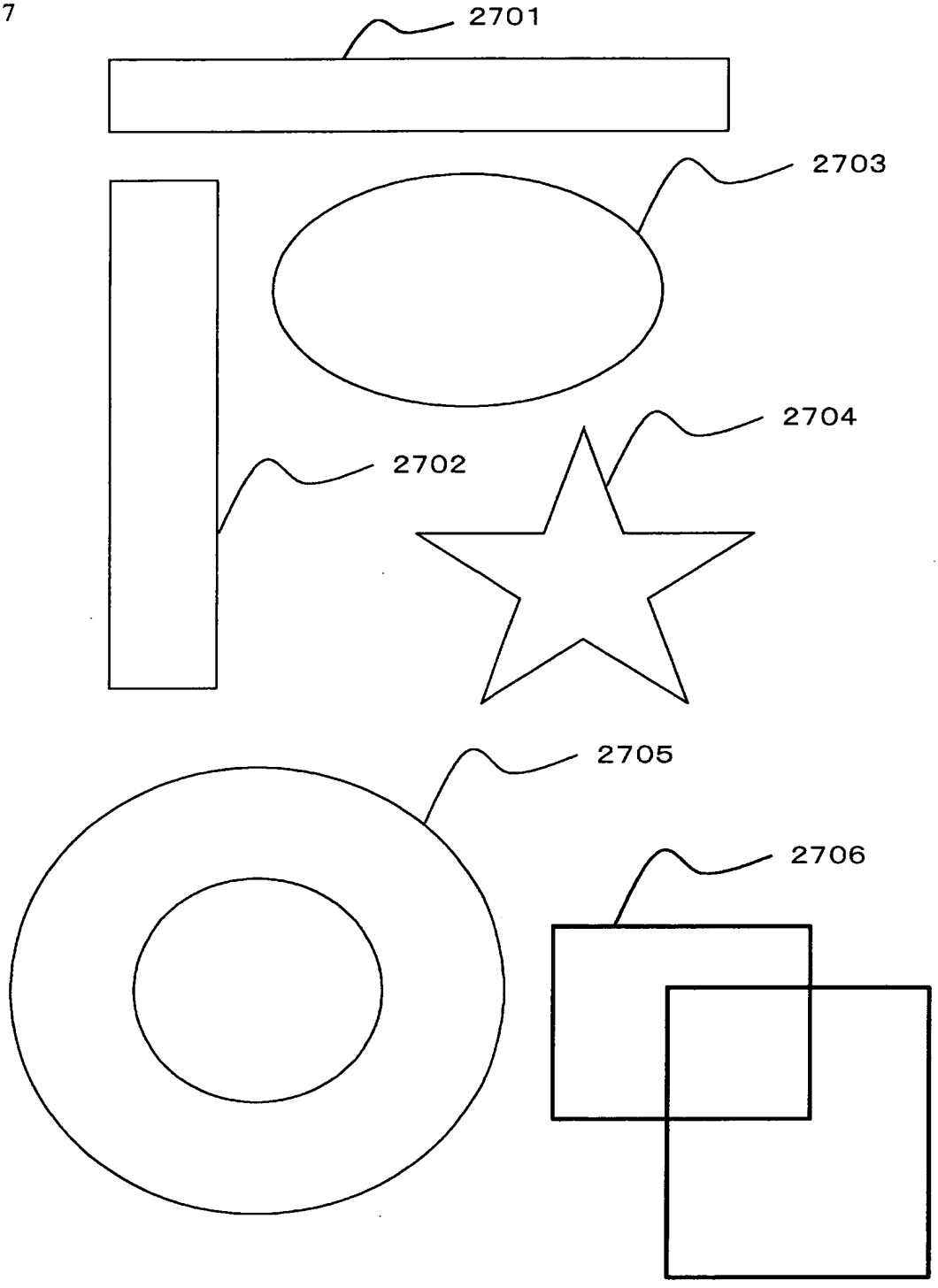


Fig.28

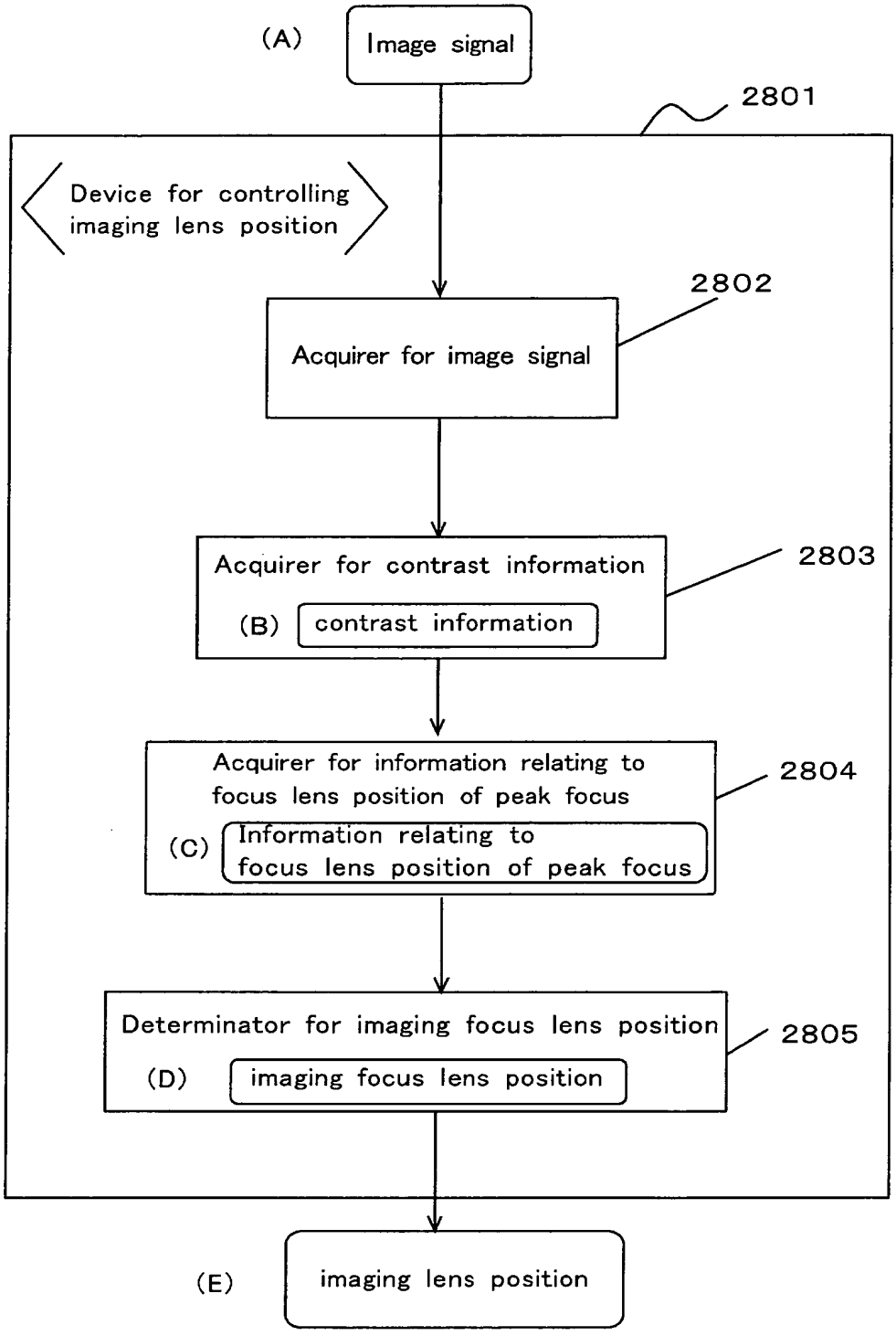

(A)
Image signal
2801
Device for controlling imaging lens position
2802
Acquirer for image signal
Acquirer for contrast information
2803
(B)
contrast information
Acquirer for information relating to focus lens position of peak focus
2804
(C)
Information relating to focus lens position of peak focus
Determinator for imaging focus lens position
2805
(D)
imaging focus lens position
(E)
imaging lens position

Fig.29

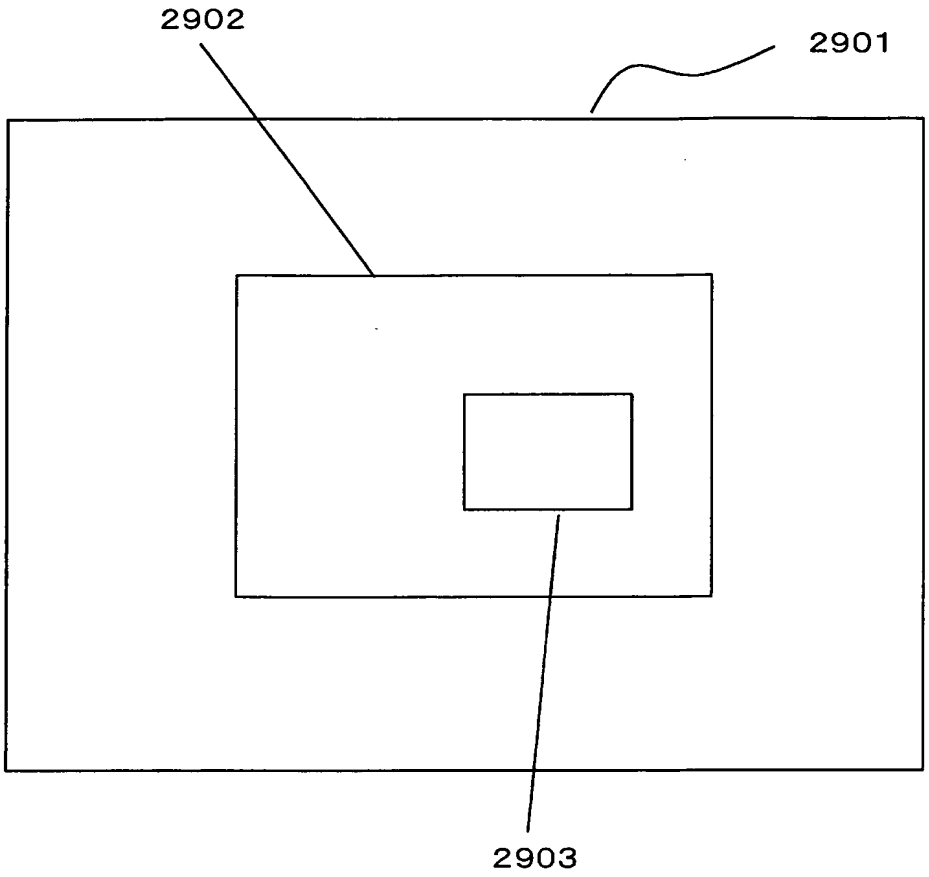


Fig.30